4.8 BIOLOGICAL RESOURCES

This section describes the biological resources occurring on the Sunset-Athens Connector Road corridor. The potential for the proposed project to result in impacts to sensitive biological resources is assessed and mitigation measures designed to eliminate or reduce potential project-related impacts are identified.

4.8.1 SETTING

FIELD SURVEYS AND HABITAT ASSESSMENT

Reconnaissance-level field assessments were conducted in 2000 and 2001 (Analytical Environmental Services, 2002). A formal wetland delineation was conducted within the alignment of the proposed road by ECORP biologists in September 2002 and was accepted by the U.S. Army Corps of Engineers (ECORP, 2002). AES biologists conducted a reconnaissance-level field assessment on June 11, 2003 to verify the prior assessments and the wetland delineations. A complete coverage, variable-intensity pedestrian survey was performed of the study area, with transect spacing from 5 to 10 meter intervals, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora were noted, and identified to the lowest possible taxon; habitat types occurring in the study area were characterized and evaluated for their potential to support regionally occurring special-status species; the study area was assessed for the presence of jurisdictional water features, isolated wetlands, and other biologically sensitive features. Locations of any species occurrences or habitat and wetland boundaries within the study area were recorded on site using a global positioning system receiver or by marking on color aerial photographs (scale 1 foot : 50 feet), and then digitized to produce the final habitat maps and acreages calculations. Geographic analyses were performed using geographical information system software (ArcView 3.2 GIS, ESRI, Inc.).

Habitat types are determined based on "biologically cohesive units." These are defined as areas that support a similar and somewhat predictable set of plants and animals. Determination of these units was achieved through field assessments conducted by qualified biologists and review of recent aerial photography. Habitat types are described based on dominant vegetation, wildlife, and structure. Four primary habitat types were identified on the project site: annual grassland; vernal pool; seasonal wetland; and freshwater marsh (**Figure 4.8-1**).

ANNUAL GRASSLAND

The project site is primarily annual grassland habitat. The annual grassland plant community is characterized by a dense to sparse cover of non-native annual grasses and forbs. Depending on the level of disturbance, degree of shade, moisture level, and other environmental factors, several species are considered dominants in this plant community including soft brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), Medusa-head (*Taeniatherum caput-medusae*), English ryegrass (*Lolium perenne*),

Figure 4.8-1 Delineation of Waters of the United States

yellow star thistle (*Centaurea solstitialis*), and tarweed (*Holocarpha virgata*). Other common plant species include clover (*Trifolium* sp.), autumn willowweed (*Epilobium brachycarpum*), curly dock (*Rumex crispus*), prickly lettuce (*Lactuca serriola*), annual beard grass (*Polypogon monspeliensis*), longbeak stork's bill (*Erodium botrys*), Italian thistle (*Carduus pycnocephalus*), California poppy (*Eschscholzia californica*), and field bindweed (*Convolvulus arvensis*). **Figure 4.8-2, Photograph 1** presents a typical view of the annual grassland habitat.

Non-native annual grassland provides habitat for western meadowlark (*Sturnella neglecta*), savannah sparrow (*Passerculus sandwichensis*), lesser goldfinch (*Carduelis psaltria*), mourning dove (*Zenaida macroura*), and other grassland species. Raptor species including red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), American kestrel (*Falco sparverius*), and great horned owl (*Bubo virginianus*) may utilize the grassland for foraging. Characteristic reptiles of annual grassland include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis melanoleucus*), southern alligator lizard (*Gerrhonotus multicarinatus*), and common garter snake (*Thamnophis sirtalis*). Mammals such as black-tailed deer (*Odocoileus hemionus*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), broad-footed mole (*Scapanus latimanus*), black-tailed jackrabbit (*Lepus californicus*), California vole (*Microtus californicus*), western harvest mouse (*Reithrodontomys megalotis*), and deer mouse (*Peromyscus maniculatus*) may utilize the annual grassland habitat.

FRESHWATER MARSH

Freshwater marsh habitat was identified along a portion of the proposed road alignment (**Figure 4.8-2**). This vegetation community is associated with an unnamed perennial drainage that is tributary to Pleasant Grove Creek. Vegetation within the freshwater marsh is dominated primarily by cattail (*Typha latifolia*). Other common plant species include knotweed, tall flatsedge (*Cyperus eragrostis*), common rush (*Juncus effusus*), dallis grass (*Paspalum dilatatum*), and hairy willowherb (*Epilobium ciliatum*). Freshwater marsh habitat provides several resources for wildlife including available water, foraging, nesting, and roosting habitat, and escape cover from predators. Characteristic animals of freshwater marsh habitats in the project area include mosquitofish (*Gambusia affinis*), garter snake, pacific tree frog, bullfrog (*Rana catesbeiana*), western pond turtle (*Clemmys marmorata*), Brewer's blackbird (*Euphagus cyanocephalus*), red-winged blackbird (*Agelaius phoeniceus*), great egret (*Ardea alba*), green heron (*Butorides virescens*), great blue heron (*Ardea herodias*), mallard (*Anas platyrhynchos*), and marsh wren (*Cistothorus palustris*).

Insert Figure 4.8-2

SEASONAL WETLAND

Several areas of seasonal wetland habitat have been identified on the project site. These features are characterized as shallow depressions that remain inundated or saturated for an extended period of time. Seasonal wetlands support hydrophytic vegetation but do not normally contain the vegetation community typically associated with vernal pool habitats. This habitat includes drainage swales found in the project area. Typical vegetation within the seasonal wetlands includes English ryegrass, canarygrass (*Phalaris* sp.), knotweed (*Polygonum* sp.), spikerush (*Eleocharis* sp.), sedge (*Carex* sp.), and curly dock. Wildlife use of seasonal wetlands is similar to that of vernal pools. The bridge design will use pile construction techniques to minimize the amount of wetland fill.

VERNAL POOL

Vernal pool habitat can be found in a scattered distribution throughout the project site (**Figure 4.8-3, Photograph 1**). Vernal pools are a specialized type of wetland characterized as shallow depressions underlain with an impermeable substrata (e.g. hardpan, clay). The impermeable substrata retards the percolation of rainwater that fills the pools. As a result, the pools stay full during winter and slowly dry up during spring. Vernal pools are biologically diverse and recognized as sensitive habitats that receive considerable regulatory attention at federal, state, and local levels. Vernal pools support a number of plant and animal species that are dependent on, and limited to, these seasonally wet areas. Typical vegetation within the on-site vernal pool habitats includes coyote-thistle (*Eryngium vaseyi*), popcornflower (*Plagiobothrys* sp.), woolly marbles (*Psilocarphus* sp.), and other vernal pool associates.

Vernal pools provide resources for wildlife and are visited by a variety of species that forage in the water and along the pool margins, feeding on insects, tadpoles, and aquatic plants. Waterfowl are known to frequent the larger and deeper pools. Animals found in the surrounding annual grassland habitat utilize vernal pools as a seasonal source of water and forage on the green herbage that can persist late into the season. Vernal pools provide breeding and rearing habitat for amphibian species associated with temporary water sources including pacific tree frog (*Hyla regilla*) and western spadefoot toad (*Spea hammondii*). Crustacean species completing their lifecycle within vernal pool habitats include vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and California linderiella (*Linderiella occidentalis*).

RUDERAL / ORNAMENTAL VEGETATION

Areas along existing roadways support ruderal vegetation. This vegetation consists primarily of non-native weedy species such as vetch, thistles, dandelion, etc. Non-native, ornamental plants were found on the perimeter of the project area, especially in the northwest portion. The only trees that exist in the proposed project area are a stand of 16 young Eucalyptus trees (*Eucalyptus* sp.), as shown. This row of

FIGURE 4.8-3

trees is located along the northern edge of Athens Avenue near the junction of the proposed connector road (**Figure 4.8-3, Photograph 2**).

SPECIAL-STATUS SPECIES ASSESSMENT

For the purposes of this EIR, "special-status" has been defined to include those species that are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as species of concern by USFWS, or as species of special concern to CDFG;
- Plants or animals that meet the definitions of rare or endangered under CEQA;
- Plants listed as rare under the California Native Plant Protection Act; or
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1B and 2).

Field surveys in 2000, 2001, and 2003 did not detect any special status plant or animal species. A list of regionally occurring special-status plant and animal species was compiled from the following sources: a review of pertinent literature; reconnaissance-level biological surveys conducted by biologists from ESA and AES; detailed botanical surveys by ECORP; informal consultation with the U. S. Fish and Wildlife Service (USFWS) via their Internet site (Internet URL = http://sacramento.fws.gov/es/spp_list.htm); and the results of a California Natural Diversity Data Base query for the "Roseville, California" U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle and the eight surrounding quadrangles (**Appendix G**).

For each species, habitat requirements were assessed and compared to the habitats present within the proposed road corridor. Based on this review of habitat requirements, the project area and/or immediate vicinity represent potential habitat for five special-status plant species and nine special-status animal species. The name, regulatory status, habitat requirements, and period of identification for these species are identified in **Table 4.8-1**. Following the table is a discussion of these special status species in relation to the Project. Formal consultation with the USFWS and California Department of Fish and Game (CDFG) is documented in **Appendix H**.

TABLE 4.8-1
POTENTIALLY OCCURRING SPECIAL STATUS SPECIES

Scientific Name **Common name**	**Federal Status**	**State Status**	**CNPS Status**	**Habitat Description**	**Ideal Period of Identification**
PLANTS					
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	FSC	--	1B	Occurs in vernal pool habitats; often found near the pool margins.	March-May
Gratiola heterosepala Boggs Lake hedge-hyssop	FSC	CE	1B	Occurs in vernal pool habitats.	April-June
Downingia pusilla Dwarf downingia	--	--	2	Occurs in vernal and mesic valley and foothill grassland habitats.	March-May
Legenere limosa Legenere	FSC	--	1B	Occurs in vernal pool habitats.	May-June
Sagittaria sanfordii Sanford's arrowhead	FSC	--	1B	Occurs in standing or slow-moving water, freshwater ponds, marshes, and wet ditches.	April-August
Animals					
Agelaius tricolor Tricolored blackbird	FSC	CSC	--	Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water in Central Valley.	April-July
Athene cunicularia Burrowing owl	FSC	CSC	--	Utilizes ground squirrel (or other mammal) burrows within open grasslands in the Central Valley and surrounding foothills for nesting and roosting.	Dec. 1 – Jan. 31 and April 15 – July 15
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	--	Vernal pools occurring within grassland habitats of the Central Valley and Coast Ranges.	December-May
Buteo swainsoni Swainson's Hawk	FSC	CT	--	Platform nests in trees or utility poles in open riparian and grassland habitats in flatlands.	March-August
Clemmys m. marmorata Northwestern pond turtle	FSC	CSC	--	Occurs throughout California in the quiet waters of ponds, marshes, creeks, and irrigation ditches.	All year
Elanus leucurus White-tailed kite	FSC	--	--	Nests in dense oak, willow, or other tree stands near open grasslands meadows, farmlands, and emergent wetlands.	February-September
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	--	Vernal pool habitats in the Central Valley from around Visalia (Tulare County) in the south to the Redding area (Shasta County) in the north.	December-May
Linderiella occidentalis California linderiella	FSC	--	--	Vernal pool habitats from near Redding (Shasta County) in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin rivers.	December-May
Spea hammondii Western spadefoot toad	FSC	CSC	--	Occurs primarily in grassland habitats, but also valley and foothill woodlands. Vernal pools are essential for breeding and egg laying.	November-March

STATUS CODES:
FEDERAL:
FE = Listed as "endangered" under the federal Endangered Species Act
FT = Listed as "threatened" under the federal Endangered Species Act
FSC = U.S. Fish and Wildlife Service designated "species of concern"
STATE:
CE = Listed as "endangered" under the California Endangered Species Act
CT = Listed as "threatened" under the California Endangered Species Act
CSC = California Department of Fish and Game designated "species of special concern"

CNPS (California Native Plant Society):
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California but more common elsewhere

Source: California Dept. of Fish & Game, 2003; California Natural Diversity Database, 2003; California Native Plant Society, 2001; US Fish and Wildlife Service, 2003

SPECIAL-STATUS PLANT SPECIES

Five special-status plant species may potentially occur in the road corridor. The regulatory status, habitats, and blooming periods of these species are identified below.

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is a federal species of concern and ranked by California Native Plant Society as List 1B. Ahart's dwarf rush is an annual herb of vernal pool habitats. This species is usually found near the pool margins. The vernal pools occurring on the project site represent potential habitat for this species. The blooming period for Ahart's dwarf rush is March to May.

Boggs Lake hedge-hyssop (*Gratiola heterosepala*) is a state endangered species and ranked by California Native Plant Society as List 1B. Boggs Lake hedge-hyssop is an annual herb of vernal pool habitats. The vernal pools occurring on the project site represents potential habitat for this species. The blooming period for Boggs Lake hedge-hyssop is April to June.

Dwarf downingia (*Downingia pusilla*) is ranked by California Native Plant Society as List 2. Dwarf downingia is an annual herb of vernal pool and mesic valley and foothill grassland habitats. Vernal pools and seasonal wetlands within the project site represents potential habitat for this species. The blooming period for dwarf downingia is March to May.

Legenere (*Legenere limosa*) is a federal species of concern and ranked by California Native Plant Society as List 1B. Legenere is annual herb of vernal pool habitats. Vernal pools within the project site represents potential habitat for this species. The blooming period for legenere is May to June.

Sanford's arrowhead (*Sagittaria sanfordii*) is a federal species of concern and ranked by California Native Plant Society as List 1B. Sanford's arrowhead is a perennial rhizomatous herb of shallow freshwater habitats. The species is found in standing or slow-moving water, freshwater ponds, marshes, and wet ditches. The freshwater marsh habitat located along the southern portion of the road alignment represents potential habitat for this species. The blooming period for Sanford's arrowhead is April to August.

SPECIAL-STATUS ANIMAL SPECIES

Nine special-status animal species may potentially occur on the project site. The regulatory status and habitats of these species are identified below.

California linderiella (*Linderiella occidentalis*) is a federal species of concern. The California linderiella is a fairy shrimp species endemic to California. It occurs in vernal pool habitats from Redding (Shasta County) in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin rivers. The California linderiella is the most tolerant of warm water, and consequent low dissolved oxygen, of all fairy shrimps endemic to the Central Valley. The vernal pools present on the project site represents suitable habitat for this species.

Vernal pool fairy shrimp *(Branchinecta lynchi)* is a federal threatened species. The vernal pool fairy shrimp inhabits vernal pools with clear to tea-colored water occurring within grassland habitats of the

Central Valley and Coast Ranges. When the vernal pools fill with rainwater, fairy shrimp hatch from cysts (shell-covered dormant embryos) present in the soil from previous years of breeding. Adults develop rapidly, breed, and produce new cysts before the pools dry up. The cysts are capable of withstanding heat, cold, and prolonged desiccation. The vernal pools present on the project site represents suitable habitat for this species.

Vernal pool tadpole shrimp (*Lepidurus packardi*) is a federal endangered species. The vernal pool tadpole shrimp is found primarily in vernal pool habitats in the Central Valley from around Visalia (Tulare County) in the south to the Redding area (Shasta County) in the north. Adult vernal pool tadpole shrimp are much larger in body mass than adult fairy shrimp and may reach an inch and a half in length. Unlike fairy shrimp, the vernal pool tadpole shrimp is able to produce more than one generation in a single wet season. Rapid sexual maturity (in as little as three weeks) allows the vernal pool tadpole shrimp to hatch, mature, and produce numerous drought-resistant cysts quickly after rainwater fills the vernal pools. The vernal pools present on the project site represents suitable habitat for this species.

Western spadefoot toad *(Spea hammondii)* is a federal species of concern and a state species of special concern. The western spadefoot toad is a nocturnal species that becomes active following relatively warm rains in late winter-spring and fall. This species inhabits valley and foothill grasslands in areas of open vegetation and short grasses. Most of the year is spent in underground burrows that are up to 36 inches deep. During dry periods, the moist soil inside burrows provides water for adsorption through the skin. The species is almost entirely terrestrial, entering water only to breed. Breeding usually occurs during the spring with the onset of the first heavy rains following warm days. Occasionally this species forms large, highly vocal, breeding aggregations. The vernal pools present on the project site represents potential breeding habitat for this species.

Northwestern pond turtle (*Clemmys marmorata marmorata*) is a federal species of concer and a state species of special concern. The northwestern pond turtle occurs throughout California west of the Cascade-Sierra crest. This species is found in the quiet waters of ponds, marshes, creeks, and irrigation ditches. The freshwater marsh along the proposed road extension alignment represents potential habitat for northwestern pond turtle.

Burrowing owl (*Athene cunicularia*) is a federal species of concern and a state species of special concern. Burrowing owls typically utilize abandoned ground squirrel (or other mammal) burrows within open grasslands in the Central Valley and surrounding foothills for nesting and roosting. They feed upon insects, small mammals, birds, reptiles, and carrion. Breeding occurs from approximately March through August. Natural mammal burrows and abandoned agricultural equipment represent potential habitat for the owl.

Swainson's hawk (*Buteo swainsoni*) is a federal species of concern and a state threatened species. Swainson's hawk nests primarily in riparian and oak woodlands, but is also known to nest in roadside trees, trees along field borders, isolated trees, and small groves. These hawks arrive onto the breeding grounds in California from early March to early April and depart for South America from late August to late September. Swainson's hawks forage in grasslands or suitable grain or alfalfa fields, or livestock pastures, and are known to forage up to 10 miles from nest sites (CDFG, 1994). The annual grassland habitat present on the project site represents foraging habitat for this species. The latest version of CNNDB (RareFind 3) reported two occurrences of Swainson’s Hawk within 5 miles of the project site:

one active nest was reported in 2001 on Pleasant Grove Creek 2.7 miles south of the project site; and the other active nest was reported in 1996 on Kaseberg Creek 4.1 miles south of the project site.

Tricolored blackbird (*Agelaius tricolor*) is a federal species of concern and a state species of special concern. Nests colonially in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water in Central Valley. Primarily feed on cultivated grains such as rice and oats, but also feed on insects and spiders during the spring and summer. Forages on ground in croplands, grassy fields, flooded land, and along edges of ponds. The freshwater marsh along the proposed road extension alignment represents potential habitat for tricolored blackbird.

White-tailed kite (*Elanus leucurus*) is a federal species of concern. Nests in dense oak, willow, or other trees stands near open grasslands, meadows, farmlands, and emergent wetlands. Forage in open grasslands and meadows feeding on mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians. Forages primarily within 0.5 miles of nest site. The annual grassland habitat present on the project site represents foraging habitat for this species, and white-tailed kites were seen foraging in the project vicinity during site visits.

WETLAND RESOURCES

REGULATORY SETTING

If a proposed project will result in the alteration or degradation of waters of the US, and thus aquatic habitat, California Department of Fish and Game requires notification prior to commencement, and may require a Lake or Streambed Alteration Agreement (CDFG Code § 1601-1603, 5650F). Any project that involves working in navigable waters of the United States, including the discharge of dredged or fill material, must first obtain authorization from the United States Army Corps of Engineers (USACE), under Section 404 of the Clean Water Act. A State Water Quality Certification (Clean Water Act Section 401 permit) may be required by the Regional Water Quality Control Board (RWQCB) before other permits are issued, and may involve implementation of a storm water pollution prevention plan.

Projects that would directly or indirectly affect vernal pool habitat require consultation with the USFWS regarding listed vernal pool crustaceans protected by the Endangered Species Act. If fill of these features were to require a 404 permit from the USACE, then consultation with USFWS could be initiated through the 404 permit process under Section 7 of the Endangered Species Act.

PROJECT HISTORY WITH RESPECT TO WETLAND RESOURCES

A formal wetland delineation of the project area was conducted by ECORP Consulting in September 2002 and submitted to USACE for verification concurrently with a Pre-Construction Notification for fill of Waters of the U.S. under Nationwide Permit 14. This delineation identified the following wetland features occurring within and adjacent to the roadway alignment: vernal pools and swales, seasonal wetlands, and freshwater wetlands. Following minor revisions to the waters of the U.S. delineation and vernal pool species habitat mapping, the following impacts to wetland resources were identified: for

direct impacts; 0.489-acre of vernal pool habitat, 0.006-acre of seasonal wetland habitat, 0.004-acre of intermittent drainage, and 0.053-acre of freshwater marsh, which includes the perennial drainage; and for indirect impacts; 1.092-acres of vernal pool habitat, 0.191-acre of seasonal wetland, 0.004-acre of intermittent drainage, and 0.608-acre of freshwater marsh, which includes the perennial drainage.

The following is a summary of agency coordination efforts for project related affects on these wetland features.

- Formal programmatic consultation for impacts to vernal habitat was initiated by USACE with USFWS on November 6, 2002.
- On April 2, 2003, USACE requests formal consultation with the National Marine Fisheries Service (NMFS) for potential impacts to listed fish.
- On April 16, 2003, the Central Valley RWQCB issues a technically-conditioned Water Quality Certification for the proposed project.
- In April 2003, USWFS staff and ECORP staff identify additional vernal pool habitat within and adjacent to the roadway alignment.
- On April 29, 2003, USFWS issues a Biological Opinion authorizing the take of vernal pool habitat conditioned by the creation of 0.842 acre and preservation of 10.232 acres of vernal pool habitat.
- On May 2, 2003, a Streambed Alteration Agreement with CDFG was finalized.
- On May 5, 2003, UAIC purchased 10.232 acres of vernal pool preservation credits to meet the requirements of the USFWS Biological Opinion.
- On May 6, 2003, UAIC purchased 0.842 acre of vernal pool creation habitat credits to meet the requirements of the USFWS Biological Opinion and purchased 0.584-acre of riparian habitat credits to meet the requirements of the Streambed Alteration Agreement.
- On May 14, 2003, ECORP submits a revised wetland delineation map to USACE identifying the additional vernal pool habitat.
- On May 21, 2003, NMFS issues a letter of concurrence indicating that with the implementation of protective measures the project would not adversely impact listed fish species.
- On June 27, 2003, USACE authorizes the fill of Waters of the U.S. under Nationwide Permit 14 conditioned by the purchase of 0.03 creation credits of vernal pool habitat, 0.21 credits of seasonal wetland habitat, and 0.76 credits of seasonal marsh habitat at a USACE approved mitigation bank.
- On July 11, 2003, UAIC purchased 0.03 creation credits of vernal pool habitat, 0.21 credits of seasonal wetland habitat, and 0.76 credits of seasonal marsh habitat.

4.8.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

A project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Comments received on the Notice of Preparation pertaining to biological resources concerns are addressed in the section below. Appendix A includes the Notice of Preparation and comment letters received as a result.

Impact

4.8.1 Development of the proposed Sunset-Athens Connector Road will result in impacts to vernal pools, seasonal wetlands, and freshwater marsh habitat. This would be a significant impact.

The following impacts to waters of the US were identified: direct impacts; 0.001-acre of vernal pool habitat, 0.006-acre of seasonal wetland habitat, 0.004-acre of intermittent drainage, and 0.053-acre of creek; and indirect impacts; 0.030-acres of vernal pools, 0.191-acre of seasonal wetland, 0.497-acre of seasonal marsh, 0.004-acre of intermittent drainage, and 0.111-acre of creek.

Mitigation Measures

Mitigation measures for impacts to vernal pools, seasonal wetlands, and freshwater marsh habitat have been previously identified through consultation and coordination with state and federal agencies with jurisdiction over these features. The purchase of mitigation credits as compensatory mitigation was completed by UAIC as discussed in the preceding section. A summary of the required mitigation is as follows:

4.8.1a CDFG Streambed Alteration Agreement No. R2-2002-566 for bridge construction over unnamed tributary to Pleasant Grove Creek (Appendix G), including the following measures: limiting construction to April 15 to October 15; placement of temporary construction pad to protect streambed from impacts from heavy equipment; revegetation of disturbed areas; keeping equipment out of wetted areas; flagging of sensitive areas; survey by qualified biologist for nesting birds within three days prior to vegetation removal; and the purchase of 0.584-acre of riparian mitigation credits through an appropriate mitigation bank.

4.8.1b Issuance of USACE, Nationwide Permit Number 14 (verification No. 200200648) on June 27, 2003, (Appendix G); UAIC purchased 0.03 creation credits of vernal pool habitat, 0.21 credits of seasonal wetland habitat, and 0.76 credits of seasonal marsh habitat at a USACE approved wetland mitigation bank.

Significance after Mitigation

Less than significant

Impact

4.8.2 Development of the proposed Sunset-Athens Connector Road extension may result in impacts to special-status plant species. This would be a significant impact.

Five special-status plant species - Ahart's dwarf rush, Boggs Lake hedge-hyssop, dwarf downingia, legenere, and Sanford's arrowhead - may potentially occur along the proposed road alignment. With the exception of Sanford's arrowhead, all of these species are associated with vernal pool habitats. The mitigation measures identified for impacts to vernal pools will reduce impacts to vernal pool associated special-status plant species to a less than significant level.

Sanford's arrowhead has a low potential to occur in the freshwater marsh habitat located in the southeastern portion of the proposed road extension. A relatively small portion of this habitat will be impact by construction of the road extension. Potential impacts to Sanford's arrowhead are considered to be less than significant.

Mitigation Measures

4.8.2a The mitigation measures identified in 4.8.1a & b, 4.8.3a and 4.8.2b below will compensate for the loss of suitable wetland habitat for these plants.

4.8.2b Staging areas shall be located away from wetland habitats. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be disposed of at a regional landfill or at another approved and/or properly permitted location. Stockpiles that are to remain on the site through the wet season shall be protected to prevent erosion.

Significance after Mitigation

Less than significant

Impact

4.8.3 Development of the proposed Sunset-Athens Connector Road may result in impacts to special-status animal species. This would be a significant impact.

Six special-status animal species - vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, western spadefoot toad, northwestern pond turtle, and burrowing owl - may potentially occur along the proposed road alignment.

Four of these species - vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, and western spadefoot toad - are associated with vernal pool habitats. Of the vernal pool associated species, the vernal pool fairy shrimp and vernal pool tadpole shrimp are listed under the federal Endangered Species Act. Development of the proposed Sunset-Athens Connector Road will result in impacts to vernal pool, seasonal wetland, and freshwater marsh

habitat. This would result in direct impacts to special-status vernal pool animal species. These impacts are considered to be significant.

The proposed project would result in direct effects to 0.842 acres and indirect effects to 4.274 acres of vernal pools.

Burrowing owls are associated with annual grassland habitats and may potentially nest in the road alignment. Impacts to nesting burrowing owls, such as destruction of burrows or inducing stress, are considered significant. Some suitable habitat exists in the vicinity of the road alignment. AES biologists conducted a protocol Phase 1 Burrowing Owl Habitat Assessment and a Phase II Burrow Survey of the road corridor June 11, 2003. The presence of raptor pellets and rodent carcasses on abandoned farm equipment near the well in the center of the road corridor necessitated detailed surveys for possible use by burrowing owls. Phase III burrowing owl surveys were performed, and consisted of 4 surveys during the breeding season in June 2003, and 4 surveys during the winter in January 2004. The surveys did not detect any owls on the project site or vicinity. Because of the absence of owls and the absence of appreciable amounts of suitable habitat, potential impacts to burrowing owls are considered to be less than significant.

Western pond turtle may occur in the freshwater marsh habitat located in the southeastern portion of the proposed connector road. A relatively small portion of this habitat will be impacted by construction of the road extension and western pond turtle is capable of dispersal from impact areas. Potential impacts to western pond turtle are considered to be less than significant.

Potential nesting habitat for Swainson's hawk, white-tailed kite, and other raptor species occurs within project site and the adjacent vicinity. If active nests are present in these areas, tree removal and other construction activities associated with development of the proposed project could result in adverse impacts to these species or other nesting birds. Although no Swainson's hawks were sighted during site visits, the CNDDB reported in 2001 the hawk occurring approximately three miles southwest of the study area. Because the project area occurs within five miles of a reported Swainson's hawk occurrence, the project area is considered foraging habitat, and implementation of the proposed habitat would constitute loss of foraging habitat (approximately 11 acres) for Swainson's hawk (CDFG, 1994). This is considered a significant impact.

Mitigation Measures

4.8.3a Mitigation for potential impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp were implemented after formal consultation with the USFWS. The project applicant shall comply with all terms of the resultant Biological Opinion Letter (1-1-03-F-0024) dated April 29th 2003 by USFWS Chief of the Endangered Species Division (Appendix G). Mitigation included avoidance and protecting wetlands by 50 foot setback with construction fencing, worker awareness training, sediment control during rainy periods, revegetation of disturbed areas, the preservation of 10.232 acres of vernal pool habitat by a preservation bank acreage purchase, and the creation of 0.842 acre of vernal pool habitat through creation credit purchase from a United States Fish and Wildlife Service-approved bank. Compensatory mitigation for vernal pool fairy shrimp and vernal

pool tadpole shrimp should reduce impacts to California linderiella and western spadefoot toad to a less than significant level.

4.8.3b To mitigate for potential impacts to burrowing owl, although not detected in the project study area and no significant suitable habitat is present, a pre-construction survey for burrowing owls shall be conducted by a qualified biologist within the 30 days prior to construction activities to establish the status of this species on the project site. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. If burrowing owls are detected on the project site, the CDFG shall be consulted before initiation of any construction activities.

4.8.3c If construction activities are to occur during the bird nesting season (approximately February-September), pre-construction surveys for nesting Swainson's hawk, white-tailed kite, other special-status bird species, and other nesting birds shall be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, the California Department of Fish and Game shall be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include the establishment of buffers and biological monitoring.

4.8.3d The loss of potential Swainson's hawk foraging habitat (approximately 11 acres) shall be mitigated according to the guidelines identified in the California Department of Fish and Game's *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG, 1994) or other arrangements acceptable to the California Department of Fish and Game. The Staff Report dictates that, for projects within 5 miles of an active nest, compensatory mitigation will be the purchase and preservation of 0.75 acres of Habitat Management lands for every 1 acre of urban development authorized, and long term management funding of $400 per acre of Habitat Management land per year.

Significance after Mitigation

Less than significant

Impact

4.8.4 Development of the proposed Sunset-Athens Connector Road may conflict with an existing habitat conservation plan or natural community conservation plan. This would be a less than significant impact.

Placer County has a conservation program, "*Placer Legacy Open Space and Agricultural Conservation Program*" (Placer County, 2003a). To address management of, and impacts to, special status species and their habitats countywide, a state/federal programmatic take permit is being developed – the *Placer Legacy Open Space and Agricultural Conservation Program Habitat Conservation Plan / Natural Community Conservation Plan* (Placer HCP/NCCP). The Placer HCP/NCCP is currently in draft phase (Placer County, 2003b). Placer County provides this overview of the Placer HCP/NCCP (Placer County, 2003b):

"*The Placer County Planning Department has prepared a draft Conservation Strategy Overview (CSO) for the first phase of the NCCP/HCP. This NCCP/HCP is being prepared to provide programmatic regulatory compliance for the state and federal Endangered Species Act in portions of western Placer County. This CSO discusses a number of guiding principles that will provide a foundation for the preparation of a comprehensive conservation strategy for the NCCP/HCP. It also provides background information on existing conditions and provides a number of implementation alternatives.*

The County of Placer is pursuing a Natural Community Conservation Plan (NCCP) under the State of California Natural Community Conservation Planning Act and a Habitat Conservation Plan (HCP) under the Federal Endangered Species Act (FESA). The NCCP/HCP will be a comprehensive countywide plan for the conservation of all natural communities, endangered species and other less sensitive species of native wildlife, fish and plants. The NCCP/HCP is an important part of the Placer Legacy Open Space and Agricultural Conservation Program and will help achieve key Program goals, such as preserving the diversity of natural plant and animal communities, and preserving agricultural land and open-space.

In addition, the NCCP/HCP planning process provides a scientific and legal basis for a series of regulatory permits from state and federal agencies that will make the environmental review of future public and private projects more consistent, more predictable and more efficient. (For more information about the planning process and regulatory permitting, please see the Natural Community Conservation Planning Agreement, dated October 5, 2001). Phase One of this three-phase NCCP/HCP program will cover the western portion of the County (roughly west of Auburn). (See Figure 1, HCCP/HCP 3-Phase Boundary.) Ultimately the NCCP/HCP program will address all of the unincorporated area of Placer County and may include other participating agencies, including cities and special districts.

This Conservation Strategy Overview is a preliminary statement of the basic goals and the approach that is now being considered for the Western Placer phase ('Phase One') of the NCCP/HCP (the 'Conservation Plan' or 'Plan'). The Overview reflects several years of work by the County, participating cities, independent scientists, regulatory agencies, and the public. The Overview is general; the actual Conservation Plan will include explicit objectives and show how they will be attained. The goal of the Phase One Conservation Plan is to provide area-wide, long-term conservation to all natural communities and certain endangered and other special status plant and animal species in Western Placer County. The Overview defines several principles under Background and Principles and outlines a Preliminary Conservation Plan approach."

The Sunset Industrial Area and thus, the Proposed Project, is in the phase 1 boundary of the Placer HCP/NCCP. The draft Placer HCP/NCCP lists the Proposed Project as a covered activity under "*Local Government Public Sector Projects, Part 1. County Covered Activities; Section C. Regional Transportation Improvements, Foothill Boulevard Extension*"(Placer County, 2003b).

Because this HCP/NCCP has not yet been adopted and the USFWS/CDFG permit issued, these goals and conservation criteria are tentative. In any case, it is expected that because the Proposed Project is a covered activity within the Placer HCP/NCCP, the Proposed Project will

not result in a conflict with this or any other habitat conservation plan or natural community plan.

Mitigation Measures

No mitigation required.